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AUTHOR Forman, Jeffrey
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ABSTRACT

Noting that traditional physical education (PE) courses are geared toward healthy, younger students, this paper examines the need to provide adapted PE programs for older adults. The paper first discusses the growing number of older adults in the population and the concomitant need to overcome the materialistic values that relegate the elderly to a second-class, impoverished status in the United States. A two-part review of selected literature is then presented, emphasizing the importance of physical activity for the aging adult and noting the recent efforts of community colleges to better serve the lifelong learning and physical education needs of older adults. Next, the paper discusses the physical and emotional benefits accrued by older adults through PE; the fear, frustration, and ridicule older adults experience in traditional PE classes; the need to modify PE activities for older adults; and the necessity of employing instructors with expertise in the physical and psychological needs of older adults. Finally, the paper provides further justification for the provision of adaptive PE courses by reviewing California statutes which authorize special programs for handicapped students, providing definitions for 11 legally recognized handicaps, many of which often apply to older adults, and urging that PE courses be provided in a form that facilitates the participation of older adults. (JP)

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ADAPTING PHYSICAL EDUCATION CURRICULUM
FOR THE OLDER ADULT

Prepared by
Jeffrey Forman
Executive Head of Adaptive and Rehabilitative Physical Education

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INTRODUCTION

Although Physical Education classes are beneficial for people of all ages the mainstreaming of older adults, individuals of 55 years and over, into regular community college P.E. classes is potentially dangerous and in most cases not feasible. Traditionally the Physical Education Curriculum has been designed with the "normal" healthy student in mind. The strenuousness of these classes prohibit all but the exceptional older individual from participating without physical injury or psychological duress. Simply stated, traditional Physical Education Curriculum does not meet the needs or consider the physical limitations of the older adult student. Adaptive Curriculum must be developed because education is a lifelong process that should be available to all segments of the population including the older adult.

STATEMENT OF THE PROBLEM

Today the average lifespan of an American is 74 years up from the 41 expected at the turn of the century. By the year 2,000 it is estimated that 20% of the population will be over 65 years old. Regardless of future predictions the fact remains that today there are already more older citizens alive than ever before in the history of this country. This situation has presented a challenge that American society has grossly failed to handle successfully.

To put it mildly, the American culture does not place much value on its older citizens. The latter is profoundly demonstrated by the fact that today, in the U.S.A., half of our elderly population is forced to live in deprivation, lacking food, essential drugs and adequate housing (Butler, 1975). The fact that the suicide rate among individuals over 60 is the highest of any age group in the nation is another disheartening example of our society's mistreatment of the elderly (Corwin, 1980). Realistically, the chances of having a good old age with satisfying final years and dignified

death are not very good in this country. In fact things have been getting so bad that even the relatively well off are not assured of an income that will support them in the years to come. As the dollar's value continues to plummet due to ever spiraling inflation, the purchasing power of individuals on fixed incomes is drastically reduced if their pension plans do not provide for proportionate cost of living increases. The cost of medical care is getting so exorbitant that all it takes is one major illness or catastrophe to wipe out a family's entire lifesavings. Individuals who are unfortunate enough to have to survive on social security alone are forced to live a life of meager subsistence.

The negative stereotype that is commonly placed on older individuals in this country stems from the fact that this is essentially a materialistic nation in which everything is looked at for its material value, including people. The non-worker is downgraded, a fact that coincides with one of the major complaints against the elderly that being, that they are useless. Forced to retire at the age of 65, aged non-workers are worth no more to us in a material sense, so they are cast aside completely disregarding the fact that they were the ones who laid the foundations for our prosperity and fought to preserve our freedom. Instead of honoring senior citizens for their contributions to society they are tossed away like an old pair of shoes. It is not the American way to throw it away and buy a new one when it is used up? As Huxley so aptly put it in his book Brave New World, "Ending is better than mending."

Instead of being revered for their knowledge, accomplishments and wisdom many older Americans are forced to retire into an oblivion known as old age, a time that often does not offer a meaningful or quality existence. As Butler put it, "The old are caught in a cultural time lag--suddenly there are a lot of them and nobody knows what to do (Butler, 1975:XI)."

REVIEW OF LITERATURE

Researchers studying the physical changes that occur when the human body ages have shed light on the importance of exercise for older individuals. In the book, Lifespan and Factors Effecting It, Daniel Hershey (1974) disclosed the following: From the age of 35 to 70 there is a 30% drop in a person's power as tested on the treadmill, stair climbing and wheel cranking. The energy available for short bursts of activity drops 60%. The amount of air that can be drawn through the lungs in 15 seconds drops 40%.

Blood vessel strength drops 30% and the elasticity of arteriole walls also decreases. The blood volume which can be pumped by the heart is reduced from four quarts per minute per square meter of body surface to almost half that figure between the ages of 20 and 90. Flexibility is lost because connective tissue is not as distensible and the tendons become stiffer and more fibrous.

Many of the physical problems commonly associated with aging such as osteoporosis, cardiac disorders, back problems, hypertension, muscular contractures and atrophy, headaches, muscular weakness, poor circulation, obesity, forward head, round shoulders and other postural anomalies can be attributed to poor nutritional practices, inability to deeply relax and the lack of proper exercise.

Data supporting the merits of physical activity for older persons can be found throughout the related literature. The April, 1977, edition of the "Research Digest" published by the President's Council on Physical Fitness and Sports discussed the results of an extensive research project studying the effects that various exercise programs have upon the fitness levels of older adults. The results of this study clearly indicated that even those individuals who have been sedentary for many years can be trained in worthwhile physical fitness components. In "The Effects of Rhythmic Exercise on the Range of Motion of Older Adults," Lessler reported that exercise can

improve flexibility and mobility in older adults in addition to helping them maintain their independence. Devries, has found that exercise for older adults is more effective in relaxing the muscles than tranquilizers. In an article entitled "Fountain of Youth" Christopher Drake reported the results of Kenneth Pelletier's research on the scattered villages throughout the world where the inhabitants live far longer than the norm. Pelletier concluded that genetic heritage, a pollution and microwave free environment, a low protein essentially vegetarian diet, regular physical exercise, moderate alcohol consumption, regular sexual activity and a good psychological attitude (a sense of control over their lives) are the apparent common ingredients for long life present in Sudan, Mexico, the Georgia Province of Russia, Ecuador and in other villages where everyone lives over the age of 100 (Drake, 1980).

REVIEW OF EDUCATIONAL LITERATURE

One current trend offering hope that this society's attitude toward seniors is changing for the better is the increased involvement of institutions of higher education in the area of lifelong learning. The 1973 State Wide California Community College Conference on Gerontology and Aging Programs, addressed the role of the community college in providing services for the aged population. This Conference specifically discussed the potential of the community college in delivering educational services for the aged, the need for social reentry for the aged, pre and post retirement training and the curriculum and methods for education for older adults.

In October, 1974, Charles Carlson and Miriam Paine from Bakersfield College, California reported the conclusions of a demonstration project for direct educational services to senior adults, prepared for the California State Office on aging. This work provided guidelines for developing and implementing educational opportunities for the aged.

In 1974, Alan Sheppard and Dianne Valla from the Virginia Polytechnic Institute and State University prepared a report entitled, "The Perceived Role of Institutions of Higher Education in Serving the Aging." The purpose of this study was to determine the current status of program offerings for the aged in selected institutions of higher education, to ascertain if programs designed to prepare people to work with the aged were being offered, to determine future plans of institutions of higher education to get involved in this field and to determine the existing attitudes of those institutions towards such endeavors. The results of this study indicated that community colleges were more aware of the needs and more willing to bear the responsibility for such programs in comparison to four year colleges and universities.

In the February, 1979 Journal of Physical Education and Recreation, Glenn West, in an article entitled "The Coming of Adult Physical Education Curriculum," discussed how the shift in the age of the population is causing increased attention to the needs of adults in physical education programs. West outlined adults' fitness needs and discussed developing adult oriented curriculum.

A 1980 survey of California college based physical education programs for older adults, conducted by The California Association for Health, Physical Education, Recreation and Dance Older Adult Task Force, disclosed that 35 institutions reported physical education programs specifically developed for the older adult student. Many colleges and universities are now offering majors in gerontology and senior educational programs are cropping up all over the country. The reason for the recent boom in lifelong educational programs is that seniors want and need such programs. In a paper presented to the Conference of the Gerontological Society, San Francisco, November, 1978 entitled "An Approach to Curriculum Development: Interfacing Senior Centers and Community Colleges," Bernard Sadowski reported that of the 100 senior

citizens, between the ages of 60-72, interviewed, most wanted to attend a community college. This trend is also demonstrated by the rapid growth of the De Anza College Adaptive Physical Education Departments Off Campus Older Adult Program. This program which began in 1977 with 6 facilities and 160 students has expanded to include 27 facilities of 1,200 older adult students in 1980.

THEORETICAL FRAMEWORK

Physical Education is probably the most beneficial educational program that older individuals can experience because it helps them maintain their mobility and independence, two factors that greatly influence an individual's self concept. By learning how to care for their physical needs and how to avoid activities that are hazardous to them, older adults can avert costly medical bills that may cripple their finances. Through exercise older individuals experience improvements, in their vigor, flexibility, strength and endurance that are reflected in their self image, attitudes towards others and their outlook on life. Physical education can help older individuals gain a sense of control over their lives because it gives them something constructive to do for themselves. Older adult exercise classes also provide participants the opportunity to socialize with others and have fun, a far better alternative than the loneliness and despair that so many seniors are subject to. Physical education can be a beneficial and rewarding learning experience for older adults only if it is properly adapted to meet their needs, for if it is maladapted it may be injurious physiologically and psychologically.

Participation by an older adult in a regular community college physical education class can subject the student to frustration, fear, ridicule and physical damage because the classes are too advanced and taxing for their abilities. The aforementioned physiological changes that naturally occur when a person ages prohibit all but the few exceptional individuals who have maintained physical activity programs throughout their lives from

participation in the rigors of a regular physical education class. Older adults need safe mild exercise programs that have been developed with their needs and abilities specifically in mind. Older students can safely participate in weightlifting, swimming, yoga, dance, jazzercise, general conditioning and self defense classes only if they have been properly modified.

An older adult adaptive physical education class is one in which the curriculum has been developed with the student's needs, wants, limitations and safety in mind. Activities may be modified in speed, duration, intensity and the space utilized. Realistic attainable goals must be set and activities selected that fall within the student's capabilities. In addition students must be encouraged to work at their own pace competing with themselves not others. Developing and implementing safe, beneficial curriculum for older adults requires a high degree of technical knowledge of the human body, the aging process and in the principles of therapeutic exercise and physical education.

The vast array of diverse physically limiting conditions that older adults experience are virtual timebombs waiting to explode in exercise classes run by untrained instructors. The dangers that are present reinforce the necessity for the specialized training of older adult physical educators in programs such as internships in corrective therapy/adaptive physical education.

The well prepared older adult physical educator must have an understanding of the physical problems and psychological trauma that older individuals experience. They must know which activities an older adult should avoid, how to evaluate students abilities and complete IEP's, how to select appropriate activities and how to work under doctor's orders when a student has a medically verified handicapping condition. These instructors must also have an in depth knowledge of cardiovascular anomalies, body mechanics, passive and active range of motion, pulmonary disorders and proper diaphragmatic breathing, conscious relaxation, CPR, corrective exercise for back disorders and other

postural deviations, orthopedic impairments and psychological disorders. The above list is by no means inclusive but it does give an indication of the necessity for instructors of older adult physical education to have specialized knowledge beyond the scope of a regular physical education instructor's background and training. The highest level of knowledge and training in this field is needed by those who work with handicapped older adults, for it is with them that the potential for injury is greatest. Further justification for specially adapted older adult physical education classes is offered in various pieces of federal and state legislation.

REVIEW OF LEGISLATION

In September, 1973, Congress passed a law, Section 504 of the Rehabilitation Act, that prohibited discrimination on the basis of physical or mental handicap in every federally assisted program. In April, 1977 a final section of 504 regulations was issued that included community colleges. Included under the term handicapped were diseases or conditions such as speech, hearing, visual or orthopedic impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, diabetes, heart disease, mental retardation, emotional illness and specific learning disabilities such as perceptual handicaps, dyslexia, minimal brain dysfunction and developmental aphasia, Hew, 1978:12

On April 24, 1978, The Board of Governors of the California Community colleges adopted a resolution on Title 5 regulations relating to educational programs and services for students with learning disabilities. In Chapter 3, Section 56352 the following definitions provided to reinforce the establishment of older adult P.E. programs.

- (e) Handicapped Students. Handicapped students are persons with exceptional needs enrolled at a Community College who, because of a professionally verified physical, communication or learning disability, cannot benefit from the regular education classes, activities and services provided by the community college without specific additional support services and programs.
- (f) Handicapped Adults. Handicapped adults are handicapped students with a physical, communication or learning disability who are 18 years of age or older (or who are minors admitted pursuant to Education Code Section 78403) and are enrolled at a community college. As used in this Chapter, the term handicapped adult includes mentally retarded students between 18 and 21 (or minors admitted pursuant to Education Code Section 78403), educationally handicapped students between 18 and 21 (or minors admitted pursuant to Education Code 78403).

The adopting of AB77 Handicapped Program Regulations by The Board of Governors of the California Community Colleges in February, 1977 also backed the cause of adaptive physical education for the handicapped older adult. In Chapter 1, Section 56002 it was stipulated that, "Before a student is assigned to special classes or programs, the college, in concert with the student, shall determine that support services in regular classes are not adequate to meet the particular student's needs." One can positively say that the needs of the population in question are not being fulfilled in regular P.E. classes.

The following definitions of physically handicapped found in the Education Code, Division 1, Title 5, Section 3600, Article 1, indicate that many older individuals can by law be considered handicapped.

The Deaf - person is deaf if he comes within any of the following descriptions: 1) hearing loss in the better ear that is from 70 decibels in the speech range to inability to distinguish more than two frequencies at the highest measurable level of intensity. 2) hearing loss in the better ear that averages 50 or more decibels in the speech range.

Severely Hard of Hearing - a person is severely hard of hearing if he comes within any of the following descriptions: 1) hearing loss in the better ear that is from 45 to 70 decibels in the speech range. 2) hearing loss in the better ear that averages more than 30 decibels in the speech range.

Moderately Hard of Hearing - a person is moderately hard of hearing when the following statement applies: 1) hearing loss in the better ear of from 20 to 40 decibels in the speech range.

Blind - a person is blind who falls within the following description: 1) visual acuity in the better eye, after the best correction is 20/200 or less.

Partially Seeing - a person is partially seeing who falls within the following description: 1) visual acuity of 20/70 or less in the better eye, after best correction.

Orthopedic or Other Health Impairment - a person is orthopedic or other health impaired if a licensed physician or surgeon finds in his diagnosis that the person has a serious impairment of his locomotion or motor function and that the impairment was caused by crippling due to one of the following:

1. Cerebral Palsy
2. Poliomyelitis
3. Infection, such as bone and joint tuberculosis and osteomyelitis
4. Birth injury, such as Erb's palsy or fractures
5. Congenital anomalies, such as congenital amputation, club foot, congenital dislocations or spina bifida
6. Trauma, such as amputations, burns, or fractures
7. Tumors, such as bone tumors, or bone cysts
8. Developmental diseases, such as coxa plana or spinal osteochondritis
9. Other conditions such as fragile bones, muscular atrophy, muscular dystrophy, Perthes' Disease, hemophilia, uncontrolled epilepsy, or severed cardiac impairment
10. Drug dependency
11. Some other cause described in the physician's written diagnosis
12. Neurological impairment or dysfunction

Aphasic and/or Other Severe Oral Language Handicapped - a person is Aphasic and/or other severe oral language handicapped when all the following apply: 1) severe disability in the comprehension and/or expression of oral language. 2) the person's score on the auditory verbal scales of one or more standard tests or sub-tests of language assessment falls two standard deviations below the mean of the person's mental age. 3) the person is nonverbal or when a spontaneous language sample of at least 50-100 utterances can be obtained, the sample shows development judged clearly inadequate for the person's age in at least two of the following areas of language development: syntactic, semantic, morphologic, phonologic.

Speech Handicapped - a person, exclusive of the deaf, severely hard of hearing, moderately hard of hearing and aphasic, as defined above, is speech handicapped by having abnormality of speech and oral language calling adverse attention to itself, impairing communication or causing maladjustment arising out of problems with articulation, rhythm, voice or oral language usage.

Other Physically Handicapped - a person is "other physically handicapped" if he comes within either description: 1) a physical illness or physical condition which makes attendance in regular day classes impossible or inadvisable. 2) physical impairment so severe as to require instruction in remedial physical education.

Multihandicapped - refers to any combination of the above.

Pregnancy - a person diagnosed by a licensed physician and surgeon as pregnant.

Section 56032 states that special classes or programs means prescribed special instruction for students with specific educational needs. Such classes and programs may also be designed:

- (a) for severely disabled students who cannot initially attend regular classes
- (b) to provide preparatory or supportive instruction to enable students to participate in activities provided for the general college population.

Section 56032 reinforces that if physical education is provided for the general college population it must also be offered in a form that older adults can participate in, because they are students with specific educational needs who require specialized instruction.

The fact that many older individuals experience one of the physical limitations listed in the aforementioned laws compounds the difficulty of categorizing older adult students as either handicapped or non-handicapped. Older adult students seem to fall into one of three categories.

A handicapped older adult student is one who has a medically verified disorder that is included in the previously listed laws. These students must have up-to-date medical verification forms signed by their physicians and on file at the college before they can be considered as handicapped students. Secondly, there are those older individuals who have visual, auditory, orthopedic, or one of the other conditions mentioned that would justly qualify them as being handicapped students, but they refuse to go the doctor for verification. Whether it be due to the expense of the visit or the stigma that being called handicapped conveys, this groups refusal to acquire medical verification of their conditions does not negate the fact that they have special needs for physical activity that are not being met in regular classes. Finally, there are those completely independent healthy older individuals who need physical activity but, due to the physical changes that occur when the human body ages, cannot participate in regular physical education classes.

SUMMARY AND CONCLUSIONS

In summary, Physical Education Curriculum must be adapted to meet the needs of the older adults in our community. Research has demonstrated how beneficial physical activity is for older individuals while common sense along with the knowledge of the physiological changes that occur due to the aging process indicate how ridiculous it is to mainstream older adults into regular physical education classes. Safe, mild, physical activity classes must be developed by instructors who are professionally trained in the needs and limitations of the older adult. Education is by no means a cure all for all of the injustices that older adults have experienced but it is a step in the right direction. It is the responsibility of our communities by law to provide students with specific educational needs the chance to participate in activities that are available to the general college population. The time is right for our communities to stop neglecting the rights of a group that soon will comprise a fifth of our population, the older adult.

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